Diabetes 101: 
A Brief Overview of Diabetes and the American Diabetes Association
After eating, most food is turned into glucose, the body’s main source of energy.
In people without diabetes, glucose stays in a healthy range because insulin is released at the right times and in the right amounts. Insulin helps glucose enter cells.
In diabetes, blood glucose builds up for several possible reasons:

- Too little insulin is made
- Liver releases too much glucose
- Cells can’t use insulin well
Symptoms of Hyperglycemia

• Increased thirst
• Increased urination
• Blurry vision
• Feeling tired
• Slow healing of cuts or wounds
• More frequent infections
• Weight loss
• Nausea and vomiting
Hyperglycemia Can Cause Serious Long-Term Problems

Chronic complications of diabetes

- Blindness
- Kidney disease
- Nerve damage
- Amputation
- Heart attack
- Stroke
Two Main Types of Diabetes

Type 1 diabetes
Pancreas makes too little or no insulin

Type 2 diabetes
• Cells do not use insulin well (insulin resistance)
• Ability for pancreas to make insulin decreases over time
Type 1 Diabetes

• 1 in 20 people with diabetes have type 1
• Most people are under age 20 when diagnosed
• Body can no longer make insulin
• Insulin is always needed for treatment
Symptoms of Type 1 Diabetes

Symptoms usually start suddenly

- Weight loss
- Loss of energy
- Increased thirst
- Frequent urination
- Diabetic ketoacidosis (emergency condition of nausea, vomiting, dehydration. Can lead to coma)
Managing Type 1 Diabetes

- Blood glucose monitoring
- Education
- Healthy food choices
- Physical activity
- Insulin
Discovery of insulin in 1921 changed type 1 diabetes from a death sentence to a chronic disease.

7-year-old child before and 3 months after insulin therapy.
Type 2 Diabetes

• Most people with diabetes have type 2
• Most people are over age 40 when diagnosed, but type 2 is becoming more common younger adults, children and teens
• Type 2 is more likely in people who:
  • Are overweight
  • Are non-Caucasian
  • Have a family history of type 2
Symptoms of Type 2 Diabetes

- Usually subtle or no symptoms in early stages:
  - Increased thirst
  - Increased urination
  - Feeling tired
  - Blurred vision
  - More frequent infections
- Symptoms may be mistaken for other situations or problems
- 1 in 4 with type 2 aren’t aware they have it
Treatment for Type 2 Diabetes May Change Over a Lifetime

Always Includes:

• Education
• Healthy eating
• Blood glucose monitoring
• Physical Activity

May Include:

• Medications, including insulin
Risk Factors for Type 2 Diabetes

• Being overweight
• Sedentary lifestyle
• Family history of diabetes
• History of gestational diabetes
• Age
• Ethnic/racial background:
  • African American
  • Hispanic/Latino
  • Native American
  • Asian American
Obesity Prevalence in Adults

1994

No Data <4.5% 4.5-5.9% 6.0-7.4% 7.5-8.9%

2000

14.0-17.9% 18.0-21.9% 22.0-25.9%

2010

≥26.0%

Diabetes Prevalence in Adults

1994

No Data <4.5% 4.5-5.9% 6.0-7.4% 7.5-8.9% ≥9.0%

2000

2010

Source: CDC
Diabetes in the United States

• More than 29 million people in the U.S. have diabetes
  • 8.1 million people with diabetes are undiagnosed
  • 9.3% of the U.S. population

• 1.7 million Americans aged 20 years or older were newly diagnosed with diabetes in 2010

• Every 19 seconds, someone is diagnosed with diabetes

Source: National Diabetes Fact Sheet, 2014
Burden of Diabetes in the United States

• The leading cause of:
  • new blindness among adults
  • kidney failure
  • non-traumatic lower-limb amputations
• Increases the risk of heart attack and stroke by 2-4 fold
• 7th leading cause of death
• Mortality rates 2-4 times greater than non-diabetic people of the same age

Source: Centers for Disease Control and Prevention
Burden of Diabetes in the United States

• Total direct and indirect cost of diagnosed diabetes is $245 billion a year
• Total diabetes-related costs are more when you add gestational diabetes, prediabetes, and undiagnosed diabetes
• 1 in 5 health care dollars is spent caring for someone with diagnosed diabetes
• 1 in 10 health care dollars is attributed directly to diabetes
What is Prediabetes?

• 1 in 3 American adults (86 million) have prediabetes
• Occurs before type 2 diabetes
• Blood glucose levels are higher than normal but not yet diabetes
• Most people with prediabetes don’t know they have it
Is There Any Good News?

• Yes, we can reduce the chances of developing type 2 diabetes in high-risk people (weight loss, exercise, medications)
• Yes, we can reduce the chances of developing diabetes complications through:
  • Blood glucose control (diet, monitoring, medication)
  • Blood pressure control
  • Cholesterol control
  • Regular visits to healthcare providers
  • Early detection and treatment of complications
Preventive Efforts Are Key

• Most of the diabetes costs are due to end-stage complications
• Investment of resources into early diagnosis, patient education, prevention and treatments pays off in:
  • Longer lives
  • Increased productivity
  • Reduced costs over the long term
Steps to Lower Your Risk of Diabetes Complications

- A1C < 7
- Blood pressure < 140/90
- Cholesterol management with lifestyle changes and medicine
- Get help to quit smoking
- Be active
- Make healthy food choices
- Take care of your feet
- Get recommended screenings and early treatment for complications
The American Diabetes Association: What We Do - Research

• In 2014, the Association made nearly $30 million available to support diabetes research
• Over the years, the Association has invested more than $700 million in more than 4,500 research projects
The American Diabetes Association: What We Do - Education

- Center for Information and Community Support communicates through phone, email and chats
- Health fairs, programs, camps and other events target millions of people around the country
- Award-winning books and Diabetes Forecast magazine for consumers
- Journals, books, and clinical guidelines for health care professionals
- Scientific Sessions: Largest diabetes meeting in the world
The American Diabetes Association: What We Do - Advocacy

• Seek increased federal and state funding for diabetes prevention, treatment and research
• Promote public policies to prevent diabetes
• Advocate to improve the availability of accessible, adequate and affordable health care
• Fight discrimination people with diabetes face at school, work, and elsewhere in their lives.
More Information

• 1-800-DIABETES
• askADA@diabetes.org
• Social media information:
  • www.Facebook.com/AmericanDiabetesAssociation
  • @AmDiabetesAssn
  • www.diabetesstopshere.org
• Web:
  • www.diabetes.org
  • www.stopdiabetes.com